

July 31, 2003
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CLAIM AMENDMENTS

Please cancel claims 1-5. Please add new claims 20-23.

1 - 12. (Cancelled)

13. (Previously Presented) A suspension damper comprising:
a cylinder tube having a gas cup therein dividing the cylinder tube into a gas-filled gas chamber and a fluid-filled fluid chamber;
a piston supported in the cylinder tube for back and forth linear translation and dividing the fluid chamber into a compression chamber facing the gas cup and a rebound chamber on the opposite side of the piston from the compression chamber; and
a valve including a valve spool movable in a bore in the piston, the valve spool having a body portion with an upper edge and a bridge connected to the body portion and extending at least partially beyond the upper edge of the body portion, and an actuating pin in contact with the bridge to move the valve spool between an open position and a closed position.

14. (Original) The suspension damper of claim 13 wherein the bridge has a lower edge, and the lower edge extends at least partially beyond the upper edge of the body portion.

15. (Original) The suspension damper of claim 13 wherein the bridge has a lower edge, and a majority of the lower edge extends at least partially beyond the upper edge of the body portion.

16. (Original) The suspension damper of claim 13 wherein the body portion is generally cylindrical.

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17. (Original) The suspension damper of claim 13 wherein the bridge defines at least one slot.

18. (Original) The suspension damper of claim 13 wherein the bridge defines at least one slot adapted to register with an aperture in the bore.

19. (Original) The suspension damper of claim 13 further comprising a spring adapted to bias the valve spool to a closed position.

20. (New) The suspension damper of claim 13 wherein the actuating pin is actuated by an expansible chamber connected to a sprung mass, wherein the expansible chamber is further connected to a spring that biases the piston.

21. (New) A suspension damper comprising:

A cylinder tube comprising a cap welded to the tube at one end and a rod guide at an other end, and

an expansible chamber defined by a flexible sleeve, a rigid skirt, the rod guide and an end fitting, the expansible chamber connecting the cylinder tube to an unsprung mass, wherein the rod guide seats a piston carried within the cylinder tube to actuate an actuating pin in contact with a bridge to control fluid flow between a primary fluid flow path and a secondary fluid flow path.

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22 (New) The damper of claim 22 further comprising:

a nut retaining a valve cup, a second washer and a valve cup around the neck, the valve cup perforated by a plurality of large apertures; and
a first valve plate and a second valve plate seated on the piston body and around the neck, the first valve plate and second valve plate separated by a beveled first washer and under an annular spacer, the first valve plate overlapping a plurality of passages in the annular spacer and the first valve plate perforated by small apertures, and the second valve plate seated on the valve cup over the large apertures.

23. (New) A suspension damper comprising:

a cylinder tube comprising a cap welded to the tube at one end and a rod guide at an other end;

a gas cap disposed within the tube and dividing the tube into a gas-filled gas chamber and a fluid-filled fluid chamber;

an expansible chamber defined by a flexible sleeve, a rigid skirt, the rod guide and an end fitting, the expansible chamber connecting the tube to an unsprung mass;

a piston supported in the tube and disposed within the fluid chamber, the piston dividing the fluid chamber into a compression chamber between the piston and the gas cup and a rebound chamber between the piston and the rod guide, wherein the piston includes a piston body having a center bore therethrough and a plurality of lateral bores into the center bore and the piston further including an external neck;

a nut retaining a valve cup and a second washer around the neck, the valve cup perforated by a plurality of large apertures;

a first valve plate and a second valve plate seated on the piston body and around the neck, the first valve plate and second valve plate separated by a beveled first washer and under an annular spacer, the first valve plate overlapping a plurality of passages in the annular spacer and the first valve plate perforated by small apertures, and the second valve plate seated on the valve cup over the large apertures; and

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an inverted cup shaped valve spool supported in the center bore on the piston body, the valve spool including a body portion and a raised bridge spanning an upper edge of the body portion, the bridge defining a pair of slots, the inside diameter of the body portion tapering outwardly, and a spring pressing the bridge against an actuating pin, the spring biasing the bridge toward a closed position, and wherein the expansible chamber seats the spring to bias the bridge to actuate the actuating pin.